Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PHILIP L. WOLF and WILLIAM T. COX

Appeal No. 1998-2831
Application No. 08/541,013

ON BRIEF

Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 6 to 12. Claim 21, the only other claim pending in this application, has been withdrawn from consideration under 37 CFR § 1.142(b) as being drawn to a nonelected invention.

We REVERSE.

BACKGROUND

The appellants' invention relates to a safety-shielded trocar. A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Moll	4,601,710	July 22, 1986
Holmes et al. (Holmes)	4,931,042	June 5, 1990

Claims 6-8 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Holmes.

Claims 11 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C.
§ 103 as obvious over Holmes.

Claim 9 stands rejected under 35 U.S.C. § 103 as being unpatentable over Holmes in view of Moll.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the answer (Paper No. 25, mailed February 4, 1997) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 21, filed February 20, 1997) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification, drawings[1] and claims, to the applied prior art references, and

[1] It is our view that the appellants' drawings are **not** the model of clarity needed to assist one in understanding the claimed invention. In fact, it would appear to us that the drawings are not in compliance with 37 CFR § 1.83(a) since the drawings do not show the interrelationship of the locking means and the latching means as set forth in claim 6 (i.e., the position where the latching means engages the locking means to retain the locking means in its second position until the axial movement of the inner cannula rearward relative to

(continued...)

to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

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[1](...continued)
the trocar cannula disengages the latching means from the locking means).

Claim 6

We will not sustain the rejection of claim 6 under 35 U.S.C. § 102(b).

To support a rejection of a claim under 35 U.S.C. § 102(b), it must be shown that each element of the claim is found, either expressly described or under principles of inherency, in a single prior art reference. See Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

Claim 6 reads as follows:

> A safety-shielded trocar, comprising;
> a trocar cannula;
> an inner cannula within said trocar cannula, wherein said inner cannula moves axially relative to said trocar cannula between an extended position and a retracted position;
> means acting on the rear end of said inner cannula for biasing said inner cannula to its extended position;
> means for locking within said trocar cannula, wherein said means for locking is movable between a first position that locks said inner cannula in its extended position and a second position that permits axial movement of said inner cannula to its retracted position; and
> means for latching within said trocar cannula wherein, upon the movement of said means for locking from its first position to its second position, said means for

> latching engages said means for locking to retain said means for locking in its second position until the axial movement of said inner cannula rearward relative to said trocar cannula disengages said means for latching from said means for locking.

Holmes' invention relates to a trocar assembly with an improved protective shield latch. As shown in Figures 1-6, Holmes' trocar assembly 10 comprises an elongate trocar obturator 22 having a piercing tip 24 at its front end, an elongate trocar tube 56 in which the obturator 22 is housed, and a tubular protective shield 26 mounted concentrically around the obturator 22 between a normally extended position in which the obturator tip 24 is covered and a retracted position in which the obturator tip 24 is exposed. A spring 28 acts on the protective shield 26 to bias the protective shield 26 to its extended position shielding the piercing tip 24. A protrusion or lip 26a extends radially from the protective shield 26. A leaf spring member 44 has one end 44a anchored relative to the obturator and a second end 44b biased to contact the protrusion 26a in a manner preventing movement of the protective shield 26 from its extended position toward its retracted position when the leaf spring element is in

contact with the protrusion 26a. A trigger 40, coupled to the leaf spring member 44 is shiftable between a lock position and a release position. When the trigger 40 is in its lock position, the protective shield 26 cannot be moved from the extended position. When the trigger 40 is in its release position, the protective shield 26 can travel to its retracted position. When the protective shield 26 moves to its retracted position, the protective shield 26 disengages the trigger 40 so that when the protective shield 26 returns to its extended position, it locks in place, even through the trigger 40 is in its release position.

Holmes teaches (column 4, line 22, to column 5, line 21) that his trocar assembly operates and is used as follows:

> Prior to use, the trocar assembly will typically be in the assembled form shown in FIGS. 1-3 with the raised rectangular section 16d fitting into recess 50a, and with the obturator and shield inserted through the opening in grommet 66, cavity 70, and the lumen of trocar tube 56.
>
> The trocar shield is normally locked in its extended position as shown in FIGS. 1-3 for safety purposes and for storage. In this position the piercing tip is shielded and cannot be damaged by inadvertent contact with other surfaces. In this locked position spring 28 biases shield 26 forwardly with lip 26a limiting the forward travel by contact against the inner surface of

front wall 16b. The bias of leaf spring member 44 keeps end 44b seated against lip 26a, preventing rearward movement of the shield.

In order to unlock the shield, head 16 is pressed toward main body 50 to the position shown in FIG. 4. By doing so, raised section 16d, with the exposed tip of trigger 40 protruding, is inserted into recess portion 50a. Rear wall 50d is forced against the tip of the trigger, causing the trigger to retract into chamber 32 to what is referred to as a release position. This movement usually takes place when the shield and obturator tip are placed against an incision in the skin and pressure is exerted against the skin by pressing against head 16. Pressure on the head of the trocar assembly concurrently shifts the trigger to the release position while applying force against the skin tissue. The tip enters the incision and underlying tissue with continued pressure.

As the trigger moves to the release position, end 44e of leaf spring member arm 44d is carried with it since ridge 40d prevents the end from sliding along the trigger side. This puts arm 44d in a more perpendicular alignment across chamber 32, forcing free end 44b laterally away from the shield, and therefore away from lip 26a, as shown in FIG. 4. With leaf spring member end 44b displaced from lip 26a, shield 26 is free to move rearwardly, exposing obturator tip 24. The force of the body cavity wall tissue on the shield forces it into the retracted position shown in FIG. 5.

As the shield moves rearwardly, lip 26a contacts the side of leaf spring member 44 between free end 44b and bend 44c. Because of the angle of the leaf spring, it acts like a cam with lip 26a to further displace free end 44b away from shield 26 to what is referred to as a withdrawn position. Concurrently with this, the end 44e of arm 44d is also displaced from side section 40c and ridge 40d. The arm is biased toward the exposed tip of the trigger so that as its end clears the ridge, it snaps

> into a position adjacent side section 40e. This is the configuration shown in FIG. 5. The devices providing this cam action are therefore also referred to collectively as means for reactivating the blocking function of leaf spring free end 44b.
>
> Once the tip has penetrated the tissue and has entered the cavity, the force against the front end of the shield ceases and the shield is automatically moved axially back to its extended position through the action of spring 28. Even with the two subassemblies pressed together and trigger 40 in its release position, free end 44b of the leaf spring member seats against lip 26a when the shield returns to the extended position. This configuration is shown in FIG. 6. Thus, while the obturator tip remains in the body cavity, its tip is protected by the protective shield which is locked into the protective position so that the tip will not accidentally cut viscera and other internal tissue unintentionally.

The appellants argue (brief, pp. 4-6) that Holmes does not disclose "means for latching" as recited in claim 6. We agree. In order to meet a "means-plus-function" limitation, the prior art must (1) perform the identical function recited in the means limitation and (2) perform that function using the structure disclosed in the specification or an equivalent structure. Cf. Carroll Touch Inc. v. Electro Mechanical Sys. Inc., 15 F.3d 1573, 1578, 27 USPQ2d 1836, 1840 (Fed. Cir. 1994); Valmont Indus. Inc. v. Reinke Mfg. Co., 983 F.2d 1039,

1042, 25 USPQ2d 1451, 1454 (Fed. Cir. 1993); Johnston v. IVAC Corp., 885 F.2d 1574, 1580, 12 USPQ2d 1382, 1386 (Fed. Cir. 1989).

It is our view that the function of the claimed "means for latching" is not met by Holmes. In that regard, the claimed function for the "means for latching" is that it engages the means for locking **upon** the movement of the means for locking from its first position to its second position to retain the means for locking in its second position until the axial movement of the inner cannula rearward relative to the trocar cannula disengages the means for latching from the means for locking. The ridge 40d of Holmes' trigger 40[2] does not perform the function of the claimed "means for latching" since ridge 40d engages with the leaf spring member 44 (i.e., means for locking) to move the leaf spring member 44 from its first position to its second position and thus the ridge 40d does not engage the leaf spring member 44 **upon** the movement of the leaf spring member 44 from its first position to its

[2] Identified by the examiner (answer, pp. 3-4) as being readable on the claimed "means for latching."

second position to retain the leaf spring member 44 in its second position.

In addition, even if the ridge 40d of Holmes' trigger 40 performed the claimed function, it is our view that the ridge 40d of Holmes' trigger 40 is not an equivalent structure[3] to the structure disclosed in the appellants' specification for performing the claimed function of the "means for latching." While there is no litmus test for an "equivalent" that can be applied with absolute certainty and predictability, there are several indicia that are sufficient to support a conclusion that one element is or is not an "equivalent" of a different element in the context of 35 U.S.C. § 112, sixth paragraph. Among the indicia that will support a conclusion that one element is or is not an equivalent of another are:

(A) Whether the prior art element(s) performs the function specified in the claim in substantially the same

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[3] In this case, the corresponding structure described in the specification for performing the claimed function of the "means for latching" is the latch pin 104 and biasing spring 106. Clearly, the ridge 40d of Holmes' trigger 40 does not correspond to the structure disclosed by the appellants.

way, and produces substantially the same results as the corresponding element(s) disclosed in the specification. Odetics Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267, 51 USPQ2d 1225, 1229-30 (Fed. Cir. 1999);

(B) Whether a person of ordinary skill in the art would have recognized the interchangeability of the element(s) shown in the prior art for the corresponding element(s) disclosed in the specification. Al-Site Corp. v. VSI International Inc., 174 F.3d 1308, 1316, 50 USPQ2d 1161, 1165 (Fed. Cir. 1999); Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1309, 46 USPQ2d 1752, 1757 (Fed. Cir. 1998);

(C) Whether the prior art element(s) is a structural equivalent of the corresponding element(s) disclosed in the specification. In re Bond, 910 F.2d 831, 833, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990);

(D) Whether there are insubstantial differences between the prior art element(s) and the corresponding element(s) disclosed in the specification. IMS Technology, Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1436, 54 USPQ2d 1129, 1138-39 (Fed. Cir. 2000); Valmont

Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1043, 25 USPQ2d 1451, 1455 (Fed. Cir. 1993).

From our review of the record in the application, the examiner never specifically found that the structure of Holmes (e.g., the ridge 40d of trigger 40) corresponding to the recited means (i.e., "means for latching . . .") was equivalent to the structure disclosed by the appellants (e.g., the latch pin 104 and biasing spring 106). Moreover, the examiner never applied any of the above-noted indicia to support a conclusion that the structure of Holmes (e.g., the ridge 40d of trigger 40) is or is not an "equivalent" of the structure disclosed by the appellants in the context of 35 U.S.C. § 112, sixth paragraph. Thus, it is our view that the examiner has not met the burden of establishing a case of anticipation since the examiner has not established the structure of Holmes (e.g., the ridge 40d of trigger 40) is an "equivalent" of the structure disclosed by the appellants.

In any event, in applying the above-noted tests for determining equivalence under the sixth paragraph of 35 U.S.C.

§ 112 to ascertain whether the structure of Holmes (e.g., the ridge 40d of trigger 40) is or is not an "equivalent" of the structure disclosed by the appellants, we conclude that the structure of Holmes is not an "equivalent" of the structure disclosed by the appellants. In that regard, it is clear to us that the structure of Holmes does not perform the function specified in the claim in substantially the same way, and does not produce substantially the same result as the corresponding elements disclosed by the appellants. Furthermore, it is our view that a person of ordinary skill in the art would not have recognized the interchangeability of the elements shown in the prior art for the corresponding elements disclosed in the appellants' specification. Based upon the above determinations, we conclude that there are substantial differences between the structure of Holmes and the structure disclosed by the appellants. Accordingly, under the above-noted tests for determining equivalence under the sixth paragraph of
35 U.S.C. § 112 we conclude that the structure in Holmes (e.g., the ridge 40d of trigger 40) is not equivalent to the structure disclosed by the appellants.

For the reasons set forth above, the decision of the examiner to reject claim 6 under 35 U.S.C. § 102(b) is reversed.

Claims 7, 8 and 10

The decision of the examiner to reject dependent claims 7, 8 and 10 under 35 U.S.C. § 102(b) is also reversed for the reasons set forth above with respect to parent claim 6.

Claims 11 and 12

The decision of the examiner to reject dependent claims 11 and 12 under 35 U.S.C. § 102(b) or, in the alternative, under
35 U.S.C. § 103 is also reversed for the reasons set forth above with respect to parent claim 6.

Claim 9

The decision of the examiner to reject dependent claim 9 under 35 U.S.C. § 103 is reversed for the reasons set forth above

with respect to parent claim 6.[4]

CONCLUSION

To summarize, the decision of the examiner to reject claims 6-8 and 10 under 35 U.S.C. § 102(b) is reversed; the decision of the examiner to reject claims 11 and 12 under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103 is reversed; and the decision of the examiner to reject claim 9 under 35 U.S.C.
§ 103 is reversed.

REVERSED

CHARLES E. FRANKFORT Administrative Patent Judge	)
JOHN P. McQUADE Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES

[4] We have reviewed the reference to Moll applied in this rejection but find nothing therein which makes up for the deficiencies of Holmes discussed above with regard to claim 6.

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JEFFREY V. NASE)
Administrative Patent Judge)

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